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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,200	03/29/2004	James L. Stevens	A04P3005-US1	5164

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EXAMINER	
HA, NGUYEN T	

ART UNIT	PAPER NUMBER
2831	

DATE MAILED: 12/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/813,200	STEVENS ET AL.	
	Examiner	Art Unit	
	Nguyen T. Ha	2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *44-51* is/are allowed.

6)☒ Claim(s) *1,8,9 and 17-43* is/are rejected.

7)☒ Claim(s) *2-7 and 10-16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 8-9 and 17-43 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 & 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Hemphill et al (US 6,197,184).

Regarding claim 1, Hemphill et al. disclose a method for producing an anodic foil for use in a capacitor comprising the steps of:

a) anodizing the foil (column 12, lines 33-34);

b) hydrating the foil (column 12, line 32);

c) forming a barrier oxide layer on the foil, wherein the steps a) and b) are performed prior step (c) (column 12, lines 37-38).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 8-9,17-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hemphill et al. (US 6,197,184) in view of Melody et al. (US 6,409,905).

Regarding claims 1 & 39, Hemphill et al. disclose a method of producing an anodic foil for use in a capacitor comprising the steps of:

- hydrating the foil (column 12, line 32); and
- forming a barrier oxide layer on the foil (column 12, lines 56-57), wherein the steps (a) and (b) are performed prior to step (c).

Hemphill et al. lack the step of anodizing the foil.

Melody et al. teach a step of anodizing the foil (column 3, lines 29-35).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use step of anodizing the foil of Melody et al. in Hemphill et al., in order to increase the surface area and increase the capacitance for the anodic foil.

Regarding claims 8 & 9, the teaching of Melody et al. includes the anodizing step is carried out at a temperature of about –25^{0}C to about 45^{0}C or about 15^{0}C to about 25^0 C (column 6, lines 16-18, which is within the claimed range).

Regarding claims 17 & 18, Hemphill et al. disclose the hydrating step comprises dipping the foil in a bath of deionized water at a temperature of about 85 ^{0}C to about 100 ^{0}C or about 95 ^{0}C (column 13, lines 12-15, which is within the claimed ranged).

Regarding claim 19, Hemphill et al. disclose the hydrating step is carried out for time duration of about 1 minute to about 3 hours (column 13, lines 15-16, which is within the claimed range).

Regarding claim 20, Hemphill et al. disclose the hydrating step is carried out for time duration of about 6 minutes to about 12 minutes (column 13, lines 15-16, which is within the claimed range).

Regarding claim 21, the teaching of Hemphill and Melody disclosed all the claimed limitation shown in claim 1. Hemphill et al. further disclose the step (a) and prior to step (b) the foil is rinsed in an overflow bath of deionized water (column 7, lines 27-31).

Regarding claim 22, Hemphill et al. disclose the step (c) comprises a placing the foil in a first forming composition at a first applied voltage (column 13, lines 18-20).

Regarding claim 23, Hemphill et al. disclose the forming composition comprises an aqueous solution of low concentration citric acid (column 12, lines 41-45).

Regarding claim 24, the teaching of Melody et al. includes an aqueous solution of low concentration carboxylic acids (column 3, lines 45-48).

Regarding claims 25 & 26, Hemphill et al. further disclose the applied voltage is about 400 volts to about 500 volts or about 430 volts to about 485 volts (column 13, lines 20-21 and column 14, lines 13-14, which is within the claimed range).

Regarding claim 27 & 28, Hemphill et al. disclose the forming step is carried out at a temperature of about 85 ^{0}C to about 100 ^{0}C or about 85 ^{0}C (column 13, lines 18-20).

Regarding claims 29 & 30, Hemphill et al. further disclose the heat-treating the foil at a temperature of about 350 ^{0}C to about 550 ^{0}C for time duration of about 1 minute to about 10 minutes (column 13, lines 34-35 and column 14, lines 1-2).

Regarding claim 31, Hemphill et al. further comprises dipping the foil in an aqueous solution of phosphoric acid (column 12, lines 41-43).

Regarding claim 32, Hemphill et al. disclose the foil is dipped in an aqueous solution comprising about 1% to about 10% by weight of phosphoric acid for a time duration of about 4 minutes to about 12 minutes at a temperature of about 50^{0}C to about 70^{0}C (column 13, lines 28-30).

Regarding claims 33 & 34, Hemphill et al. further disclose reforming the barrier oxide layer on the foil, dipping the foil in a second forming composition at a second applied voltage (column 14, lines 11-14).

Regarding claim 35, Hemphill et al. disclose the reforming step; the foil is rinsed in an overflow bath of deionized water (figure 2).

Regarding claims 36 & 37, Hemphill et al. further disclose reforming the barrier oxide layer on the foil comprises dipping the foil in a second forming composition at a second applied voltage (column 14, lines 11-14).

Regarding claim 38, Hemphill et al. disclose the reforming step; the foil is rinsed in an overflow bath of deionized water (figure 2).

Regarding claims 40 & 41, Hemphill et al. disclose the oxide layer formed on the anodic foil has a rise time of less than 15 seconds after 2 hours of exposure to boiling water or about 1 second to about 3 second after 2 hours of exposure to boiling water (column 13, lines 34-35 and column 14, lines 1-2)

Regarding claim 42, Hemphill et al. disclose an electrolytic capacitor comprising an anodic foil produced by the method (column 12, lines 29-30)

Regarding claim 43, Hemphill et al. disclose an implantable cardioverter defibrillator comprising an electrolytic capacitor having an anodic foil produced by the method (column 11, lines 50-52).

Allowable Subject Matter

6. Claims 2-7 and 10-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With respect to claims 2-7 and 10-16, the prior art alone or in combination does not teach the limitation of the anodizing step comprises dipping the foil in an anodizing composition and applying a current to form a nano-porous amorphous oxide layer on the foil.

7. Claims 44-51 are allowed.

The following is an examiner's statement of reasons for allowance:

With respect to claims 44-50, the prior art alone or in combination does not teach the limitation of a method of producing an anodic foil for use in a capacitor comprising the steps of: anodizing the foil by placing the foil in an aqueous solution of an oxidizing acid at a temperature of about 15 0C to about 25 0C and applying a current, and forming a barrier oxide layer on the foil by placing the foil in a first forming composition and applying a first voltage to the foil.

With respect to claim 51, the prior art alone or in combination does not teach the limitation of a method of producing an anodic foil for use in a capacitor comprising the steps of: anodizing the foil to produce a nano-porous amorphous oxide layer, and hydrating the foil to convert the nano-porous amorphous oxide layer to crystalline precursor layer.

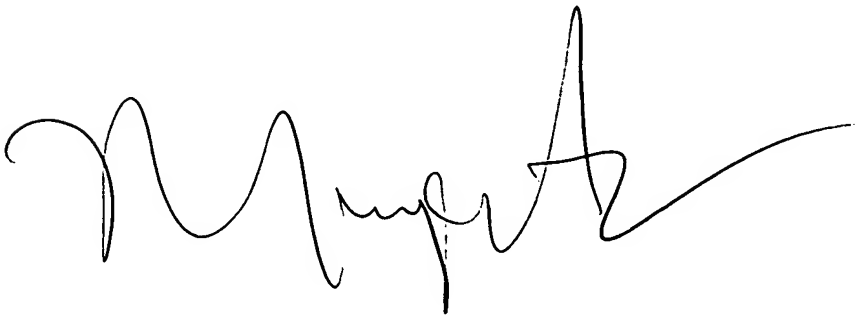
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen T. Ha whose telephone number is 571-272-1974. The examiner can normally be reached on Monday-Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext. 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Nguyen T. Ha
December 6, 2005